

New York State Energy Research and Development Authority

# Green Jobs – Green New York Q1 2018 Quarterly Update

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Quarter ending March 31, 2018

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## Program Description

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Green Jobs – Green New York (GJGNY) provides funding for energy assessments, low-cost financing for energy upgrades, and technical and financial support to develop a clean energy workforce. GJGNY is a statewide effort to strengthen communities through energy efficiency and uses constituency-based organizations to support program outreach in underserved communities. GJGNY enables New Yorkers to make a significant difference in homes, businesses and neighborhoods—making them more comfortable, more sustainable, and more economically sound. GJGNY is administered by NYSERDA and made available by the [Green Jobs – Green New York Act of 2009](#).

# 1 Workforce Development

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GJGNY supports a broad range of education and training programs aimed at creating an experienced green collar workforce. This workforce will have the relevant skills and credentials needed to support New York State's growing clean energy economy. The workforce training programs help meet the demand for energy efficiency and renewable energy measures and technologies. Through public-private partnerships, Workforce Development Programs fund the development and delivery of cutting-edge training programs and provide financial support to those who wish to pursue new career training, professional certifications and critical on-the-job training.

## 1.1 Training Program Updates

### Clean Energy Technical Training

To date, 3,919 New Yorkers have been trained in a range of energy efficiency and renewable energy courses.

While most GJGNY-funded training partnership agreements ended by December 2016, NYSERDA has one active GJGNY-funded training partnership agreement with Green City Force (GCF), a Brooklyn-based provider of training and job placement support to disadvantaged young adults. Through March 2018, a total of 53 students have graduated. The first cohort of 35 students graduated in June 2017 and a second cohort of 18 students graduated in February 2018. A new cohort of 25 students began their training in March, with an anticipated completion timeframe of late June. As part of their industry-related training, members visited ConEdison's Learning Center in Long Island City, Queens for a panel discussion on careers at the company and a tour of the training facilities. To date, 32 graduates have been placed in clean energy sector jobs, two have been placed in jobs outside the clean energy sector, and one is still searching for work. Additionally, the 18 recent graduates completed internships with the EmPower program in April. They were divided into teams making outreach calls, conducting audits, and tracking data for submission.

## 2 One- to Four-Family Residential Buildings Program

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GJGNY provides home assessments and financing to support energy efficiency and renewable energy improvements to one-to-four family homes.

NYSERDA's Home Performance with ENERGY STAR® (HPwES) program offers homeowners in New York State a comprehensive approach to improving energy efficiency and home comfort while saving money. Participating Building Performance Institute (BPI) Gold Star contractors conduct energy assessments and upgrades. Income-qualified homeowners are eligible for additional incentives to make energy improvements.

The GJGNY loan also supports deployment of solar photovoltaic (PV) through the NY-Sun program, solar thermal (hot water) systems, and certain wood and pellet stove replacements through Renewable Heat NY.

### **2.1 Home Performance with ENERGY STAR® Assessments**

In the first quarter of 2018 4,559 free/reduced-cost comprehensive home energy assessment applications were received. The program to date conversion rate from assessment to energy retrofit remains strong at 31 percent. The conversion rate for the period between March 2017 and March 2018 was 44 percent. The average cycle time between assessment completion to project completion for the period between March 2017 and March 2018 was 76 days.

**Table 2-1. Home Performance with ENERGY STAR Assessments.**

Timeframe	GJGNY Totals since 11/15/10 <sup>b</sup>	
<b>Received Audit Applications</b>		
1st Quarter 2018	4,559	
Program to Date	164,537	
<b>Average # of Applications Received per Month</b>	<b>1,859</b>	
<b>Approved Audit Applications</b>		
Free		
1st Quarter 2018	4,249	
Program to Date	146,417	
Reduced Cost		
1st Quarter 2018	439	
Program to Date	11,798	
<b>Total Approved Audit Applications</b>	<b>158,215</b>	
<b>Average # of Applications Approved Per Month</b>	<b>1,788</b>	
<b>Scheduled Audits</b>		
<b>Scheduled Audits as of End of Current Month</b>	<b>5,692</b>	
<b>Completed Audits<sup>c</sup></b>		
Goal: (77,500-Audits)	<b>Free</b>	
	1st Quarter 2018	2,829
	Program to Date	111,741
	<b>Reduced Cost</b>	
	1st Quarter 2018	232
	Program to Date	8,590
<b>Total Completed Audits</b>	<b>120,331</b>	
<b>Audit Funds Invoiced to Date</b>	<b>\$30,680,600</b>	

<sup>a</sup> Round 2 CBO production as of 6/1/2012.  
<sup>b</sup> GJGNY totals since 11/15/10 are inclusive of CBO initiated activities.  
<sup>c</sup> Reported data includes all audits offered through the Residential Free/Reduced-Cost Energy Audit Program. In mid-2016, NYSERDA began using CEF funds for audits in CEF electric utility territories.

## 2.2 Home Performance with ENERGY STAR® Projects

Of the 37,038 projects completed through HPwES resulting from a GJGNY assessment and/or GJGNY financing, 13,199 (36 percent) projects are associated with income-qualified customers who have a household income of up to 80 percent of the county median income.

In the first quarter of 2018, there were 1,211 Home Performance with ENERGY STAR® completions. Of the 1,211 Home Performance with ENERGY STAR® project completions in the first quarter 1,034 were associated with a free/reduced cost audit or GJGNY Financing. Fifty-two percent of the project completions were for income-qualified customers who have a household income of up to 80 percent of the state or county median income.

**Table 2-2. Home Performance with ENERGY STAR Projects.**

Timeframe	GJGNY Totals since 11/15/10 <sup>a</sup>	HPwES Totals since 11/15/10 <sup>b</sup>
<b>Projects Contracted</b>		
To Date	35,795	NA
<b>Completed Projects/Units<sup>c</sup></b>		
<b>Assisted</b>		
1st Quarter 2018	542 / 571	633 / 675
Program to Date	13,199 / 13,741	20,671 / 21,406
<b>Market Rate</b>		
1st Quarter 2018	492 / 510	578 / 596
Program to Date	23,839 / 24,130	28,972 / 29,334
<b>Total Completed Projects/Units (Project Goal: 25,000)</b>	<b>37,038 / 37,871</b>	<b>49,643 / 50,740</b>
<sup>a</sup> Projects completed resulting from a GJGNY Audit and/or GJGNY Financing. <sup>b</sup> Total HPwES including GJGNY Projects. <sup>c</sup> Projects completed and units served resulting from GJGNY.		

## 2.3 One- to Four-Family Residential Buildings Financing

New York residents can apply for Home Performance with Energy Star® (HPwES) to finance energy efficiency work, including, but not limited to, upgrading insulation, air sealing, and replacing outdated appliances with Energy Star® rated products that may render savings on their monthly utility bill. Green Jobs-Green New York (GJGNY) financing has also expanded to net-metered technologies, such as solar electric systems and solar thermal systems, that have attracted many customers statewide.

GJGNY provides two loan options for consumers: On-Bill Recovery (OBR) loans, which enable customers to make payments through their utility bills; and Smart Energy loans, unsecured loans that are paid back directly to NYSERDA’s loan servicing contractor. Both loans offer expanded credit qualification criteria (Tier 2) enabling some applicants who would not qualify for a loan based on more traditional criteria (Tier 1) to qualify for GJGNY loans.

**Table 2-3. Green Jobs–Green New York Financing, Summary by Loan Purpose and Loan Type.**

EE= energy efficiency only. PV = PV only. EE & PV = a loan incorporating both energy efficiency and PV. RHNY = renewable heat (pellet or wood stoves). ST = solar thermal.

GJGNY Loan Type	Applications Received (Number)*	Loans Issued (Number)	Loans Issued (Dollars)
EE Smart Energy Loan		11,259	\$101,390,206.25
EE On-Bill Recovery Loan		3,906	\$44,119,048.43
<b>Total</b>	<b>33,000</b>	<b>15,165</b>	<b>\$145,509,255</b>
PV Smart Energy Loan		3,446	\$56,728,271.01
PV On-Bill Recovery Loan		3,661	\$62,735,102.33
<b>Total</b>	<b>10,942</b>	<b>7,107</b>	<b>\$119,463,373</b>
EE & PV Smart Energy Loan		26	\$473,301.40
EE & PV On-Bill Recovery Loan		8	\$176,050.13
<b>Total</b>	<b>346</b>	<b>34</b>	<b>\$649,352</b>
RHNY Smart Energy Loan		30	\$288,458.42
RHNY On-Bill Recovery Loan		1	\$13,445.00
<b>Total</b>	<b>95</b>	<b>31</b>	<b>\$301,903</b>
ST Smart Energy Loan		9	\$64,039.49
ST On-Bill Recovery Loan		2	\$11,510.00
<b>Total</b>	<b>14</b>	<b>11</b>	<b>\$75,549</b>
<b>Grand Total</b>	<b>44,397</b>	<b>22,348</b>	<b>\$265,999,432</b>

\*Applicants are not required to choose loan type (Smart Energy vs On-Bill Loan) at time of application, therefore only total applications are shown.

**Table 2-4. Green Jobs–Green New York Financing, Summary by Loan Type and Underwriting.**

Loan Type Summary							
	Smart Energy			On-Bill Recovery			Total
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total	
Loans Issued	12,003	2,767	14,770	6,413	1,165	7,578	22,348
Value (Dollars)	\$130,837,150	\$28,107,127	158,944,277	\$90,921,671	\$16,133,485	107,055,156	\$265,999,432
Average Loan	\$10,900	\$10,158	\$10,761	\$14,178	\$13,848	\$14,127	
Average Term	13.5	14.2	13.6	14.7	14.7	14.7	

**Table 2-5. Green Jobs–Green New York Financing, Energy Efficiency Loans, by Market Indicator and Underwriting**

Energy Efficiency Loans (Assisted vs. Market Rate)							
	Assisted			Market Rate			Grand Total
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total	
Loans Issued	3,821	1,736	5,557	8,500	1,108	9,608	15,165
Value (Dollars)	\$26,944,639	\$12,724,588	\$39,669,228	\$93,147,652	\$12,692,375	\$105,840,027	\$145,509,255
Tier %	69%	31%	100%	88%	12%	100%	
% of Total Loans issued			37%			63%	100%
% of Total Funds Issued			27%			73%	100%
Average Loan Amount	\$7,138			\$11,015			\$9,595

**Table 2-6. Green Jobs–Green New York Financing, Photovoltaic Loan Summary, by Market Indicator and Underwriting.**

Photovoltaic Loan Summary (Affordable Solar vs. Market Rate)							
	Affordable Solar			Market Rate			Grand Total
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total	
Loans Issued	109	31	140	5,956	1,041	6,997	7,137
Value (Dollars)	\$1,484,850	\$473,890	\$1,958,740	\$99,889,466	\$18,184,301	\$118,073,767	\$120,032,508
Tier %	78%	22%	100%	85%	15%	100%	
% of Total Loans Issued			2%			98%	100%
% of Total Loans Issued			2%			98%	100%
Average Loan Amount	\$13,991			\$16,874			\$16,818

Figure 2-1. Green Jobs–Green New York Financing, Residential Applications Received and Denied, per Quarter, for the Past Three Years.

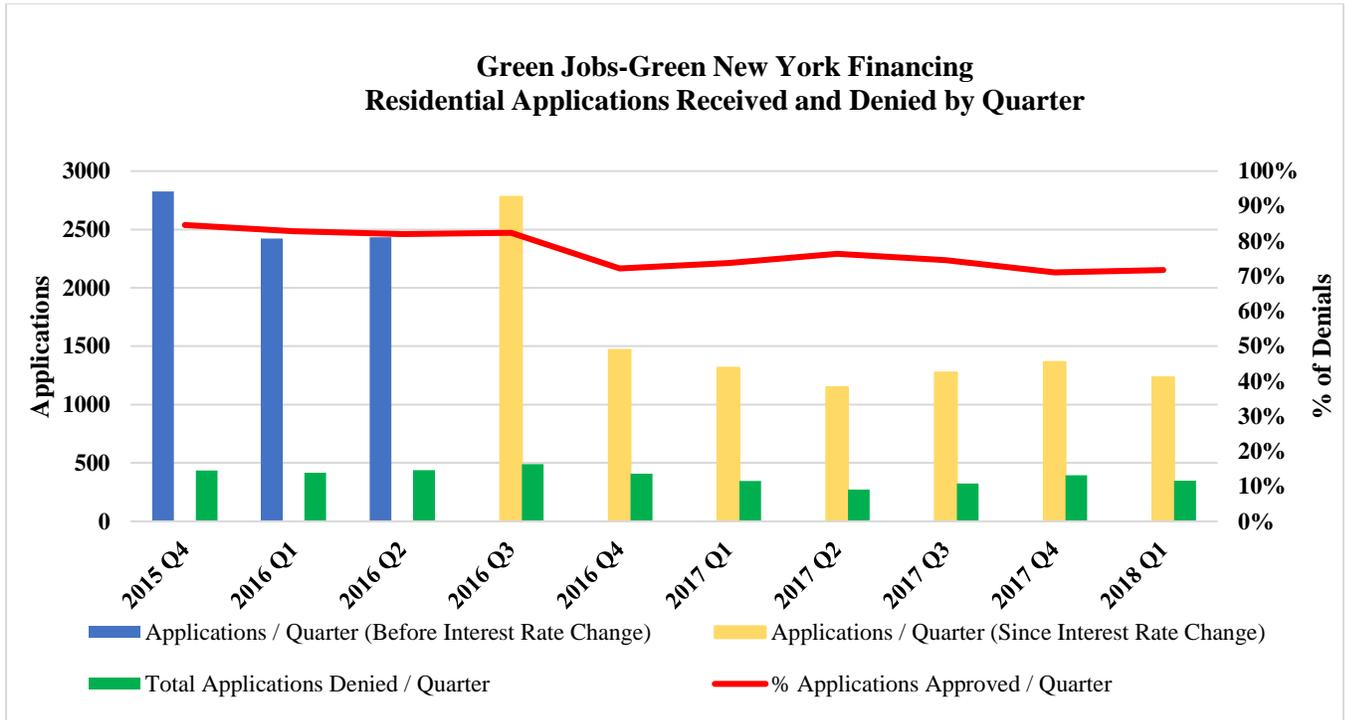


Figure 2-2. Green Jobs–Green New York Financing, Smart Energy and On-Bill Recovery Loans Issued per Quarter.

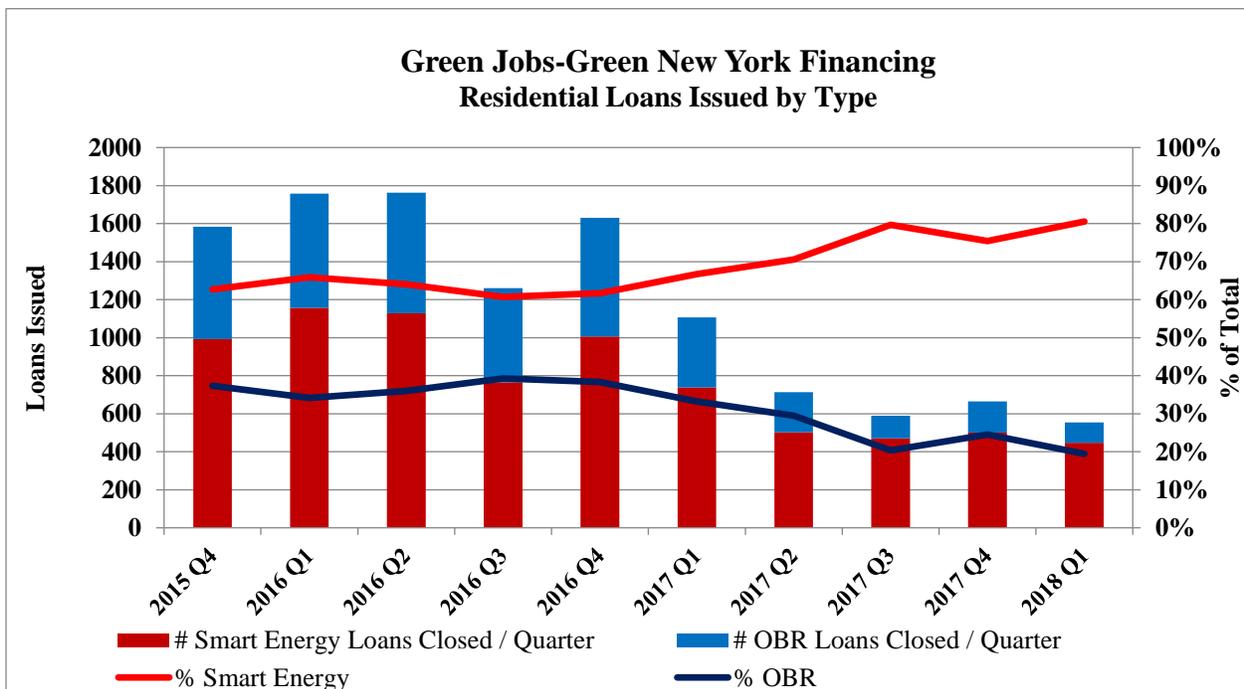


Figure 2-3. Green Jobs–Green New York Financing, Loans Issued by Tier, per Quarter.

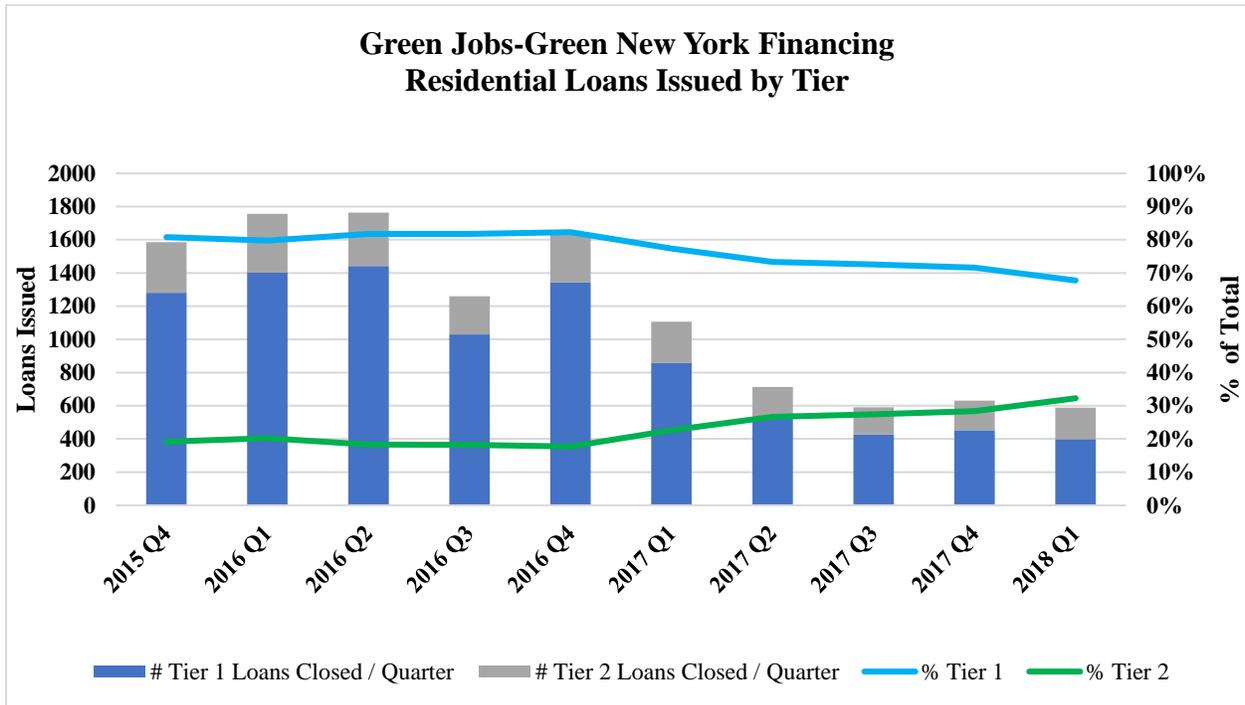


Table 2-7. Green Jobs–Green New York Financing, Residential Energy Efficiency Loans Issued for Applications Received on or after 9/01/16.

<b>Green Jobs-Green New York Financing (Energy Efficiency Only)</b>		
<b>Residential Loans Issued for Applications Received on or after 9/01/16</b>		
<u>Income Category</u>	<u># Loans</u>	<u>% of Loans</u>
<80% AMI *	1,334	65%
80-120% AMI*	267	13%
>120% AMI* (Tier 1)	382	18%
>120% AMI* (Tier 2)	83	4%
<b>Total Loans Issued</b>	<b>2,066</b>	<b>100%</b>

\* AMI = Area Median Income, which is the greater of the State or County Median Income. Households with incomes greater than 120% AMI are further grouped by underwriting Tier, with different interest rates applying to each group.

**Table 2-8. Green Jobs–Green New York Financing, Residential Renewables and Combined Technologies Loans Issued for Applications Received on or after 9/01/16.**

<b>Green Jobs-Green New York Financing (Renewables &amp; Combined Technologies Only) Residential Loans Issued for Applications Received on or after 9/01/16</b>		
<u>Income Category</u>	<u># Loans</u>	<u>% of Loans</u>
<80% AMI*	84	27%
80-120% AMI*	85	28%
>120% AMI* (Tier 1)	113	37%
>120% AMI* (Tier 2)	25	8%
<b>Total Loans Issued</b>	<b>307</b>	<b>100%</b>

\* AMI = Area Median Income, which is the greater of the State or County Median Income. Households with incomes greater than 120% AMI are further grouped by underwriting Tier, with different interest rates applying to each group.

### 3 Multifamily Energy Performance Portfolio

NYSERDA offers a portfolio of programs and incentives for owners, facility managers, developers, and condo/co-op boards of multifamily buildings with five or more units in New York State. NYSERDA’s programs make it easier to assess, fund, implement, and measure energy efficiency upgrades that improve building performance and save money.

#### 3.1 Multifamily Energy Performance Assessments

Through March 2018, from the 333 approved assessment applications, 304 (91 percent) assessments have been completed.

**Table 3-1. Multifamily Energy Performance Assessments.**

Metric	Q1 2018			Cumulative			
	Affordable Housing	Market Rate Housing	Monthly Total	Affordable Housing	Market Rate Housing	Program Total	Budget/ Goal
Received Assessment Applications	0	0	0	193	140	333	
Approved Assessment Applications	0	0	0	193	140	333	500
Assessment Funds Encumbered (\$)	0	0	0	2,342,960	1,120,987	3,463,947	
Assessment Funds Invoiced (\$)	0	0	0	1,291,100	\$694,930	1,986,030	3,000,000
Completed Assessments	0	0	0	170	134	304	400
Number of Projects Withdrawing from MPP after Assessment*	0	0	0	17	29	46	
*MPP Projects must achieve a minimum of 15 percent in energy savings. Projects may choose to proceed outside MPP. Some may choose smaller work scopes which will not achieve program standard and thus not be eligible for MPP and some may elect to access utility incentives. If energy efficiency projects are completed, building owners that have an authorized assessment would still be eligible to apply for GJGNY financing.							

### 3.2 Multifamily Energy Performance Projects

Through March 2018, the Multifamily Energy Performance Program has completed 60,928 housing units with installed measures. Of those units with installed measures, 30,853 (51 percent) are associated with affordable housing.

**Table 3-2. Multifamily Energy Performance Projects.**

Metric	Q1 2018			Cumulative		
	Affordable Housing	Market Rate Housing	Monthly Total	Affordable Housing	Market Rate Housing	Program Total
Projects in Pipeline*	0	0	0	193	140	333
Projects Contracted to have Measures Installed	0	0	0	193	140	333
Households Associated with Projects Contracted	0	0	0	32,785	32,817	65,602
Projects with Installed Measures (units)	0	0	0	30,833	30,075	60,928
kWh Savings of Installed Measures	0	0	0	36,240,711.32	16,804,664.55	53045375.87
MMBtu Savings of Installed Measures	0	0	0	475,792.49	352,692.25	828,484.74
Dollar Savings of Installed Measures	0	0	0	\$24,008,235	\$11,896,859.98	\$35,905,094.98

\*Projects that receive GJGNY-supported assessments and/or financing may also receive incentives through the System Benefits Charge (SBC), Energy Efficiency Portfolio Standard (EEPS), Regional Green House Gas Initiative (RGGI), and/or utility programs, such that the projects' energy savings may not all be attributable solely to GJGNY.

### 3.3 Multifamily Energy Performance Financing

Through March 2018, the Multifamily Performance Program has closed 22 loans with a total value of \$12,099,798. NYSERDA’s share of that total loan value is \$3,834,685.

**Table 3-3. Multifamily Energy Performance Financing.**

Loan Status	Q1 2018			Cumulative		
	Number	NYSERDA Share of Total Loan Value	Total Loan Value	Number	NYSERDA Share of Total Loan Value	Total Loan Value
Participation Agreements Approved	0	\$0	\$0	22	\$3,834,685	\$12,099,798
Loans Closed	0	\$0	\$0	22	\$3,834,685	\$12,099,798

## 4 Small Commercial Energy Efficiency Program

NYSERDA’s Small Commercial Energy Efficiency Program offers financial and technical assistance to help small businesses improve their energy efficiency and reduce their energy costs. This program offers free assessments and two low-interest loan options to finance energy efficiency projects. The first one is On-Bill Recovery Financing, which makes it possible for small businesses and nonprofits to use the savings on their energy bills to pay for their energy efficiency upgrades. The second one is the Participation Loan, where NYSERDA partners with lenders across New York State to help small businesses and nonprofits access low-interest financing for energy efficiency improvements by providing a share of the loan principle at a low interest rate. In addition, eligible small business and not-for-profit customers participating in NYSERDA’s NY-Sun Solar PV Incentive Program can now access low-interest GJGNY financing to install solar PV systems of up to 200 kW.

### 4.1 Small Commercial Energy Efficiency Assessments

Through March 2018, the Small Commercial Energy Efficiency Program has completed 4,216 assessments. The assessment program closed in December 2016, but eligible applicants can receive cost-shared assessments via NYSERDA’s FlexTech program. NYSERDA will create and issue a measure package in 2018, which will include an outreach component.

**Table 4-1. Small Commercial Energy Efficiency Assessments.**

Metric	Q1 2018			Program Cumulative		
	GJGNY	ARRA*	Monthly Total	GJGNY	ARRA*	Program Total
Received Assessment Applications	0	0	0	3,574	934	4,508
Completed Assessments	0	0	0	3,367	849	4,216

\*The GJGNY Act of 2009 restricts the provision of GJGNY-funded energy assessments to small business and not-for-profit organizations with 10 employees or less. American Recovery and Reinvestment Act of 2009 (ARRA) funds were used for eligible small business and not-for-profit organizations that have more than ten employees. ARRA funding expired on September 30, 2013.

## 4.2 Small Commercial Energy Efficiency Projects

Through March 2018, the Small Commercial Energy Efficiency Program estimates 1,855 project completions as a result of GJGNY funded assessments.

**Table 4-2. Small Commercial Energy Efficiency Projects.**

Metric	Q1 2018	GJGNY Program Cumulative
<b>Estimated Projects Completed*</b>	0	1855
*The 2015 Small Commercial Energy Efficiency Program Impact Evaluation found that 44 percent of the energy savings recommended through program audits were reported to be implemented. Estimated projects completed are inclusive of those that used ARRA funds referenced in Table 5-1 above.		

## 4.3 Small Commercial Energy Efficiency Financing

Through March 2018, the Small Commercial Energy Efficiency Program has closed 75 loans with a total value of \$3,652,917. NYSERDA’s share of that total loan value is \$2,412,533.

**Table 4-3. Small Commercial Energy Efficiency Financing.**

Loan Status	Q1 2018			Program Cumulative		
	Number	NYSERDA Share of Total Loan Value	Total Loan Value**	Number	NYSERDA Share of Total Loan Value	Total Loan Value**
Applications Approved*						
Participation Loans	3	\$83,979	\$167,957	150	\$3,070,091	\$6,439,073
On-Bill Recovery	0	\$0	\$0	91	\$2,851,504	\$3,551,619
Loans Closed						
Participation Loans	1	\$45,362	\$90,724	32	\$1,029,824	\$2,166,068
On-Bill Recovery	3	\$124,500	\$124,500	43	\$1,383,709	\$1,486,849
<b>Total</b>	<b>4</b>	<b>\$169,862</b>	<b>\$215,224</b>	<b>75</b>	<b>\$2,413,533</b>	<b>\$3,652,917</b>
The Small Commercial Energy Efficiency Financing Program has 13 participating lenders.						
* Customer applications are assessed for both Participation Loan and On-Bill Recovery Loan eligibility prior to approval. Approved application values are inclusive of loans that have moved forward to closure.						
**The total loan value represents the total value of the loan issued by the lender to the borrower. The total loan value may include financing for non-energy efficiency projects. NYSERDA’s share of the total loan value represents 50% of the total energy project cost or \$50,000, whichever is less.						

## 5 Evaluation

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The overarching goals of Evaluation are to provide objective and credible information that supports optimum program operation and outcomes, as well as program accountability. Three major types of evaluation are implemented for the GJGNY program. Process evaluation provides information to support program operations by addressing program efficiency and effectiveness, satisfaction and barriers to participation, among other issues. Impact evaluation provides information to help understand actual program impact and improve energy impact estimates, including economic, environmental, and non-energy benefits; in doing so it supports program accountability. Market evaluation also provides information to support program operations and accountability by characterizing and assessing target markets for programs.

### **Evaluation Activities**

There are no GJGNY evaluation activities active at this time. Any new activity will be reported to the Advisory Council in future reports. [GJGNY evaluation reports](#) can be found on NYSERDA's website.